

**REMARKS**

This Amendment responds to the Office Action mailed May 23, 2007 in the above-identified application. Based on the foregoing amendments and the following comments, reconsideration and allowance of the application are respectfully requested.

By this Amendment, claims 1, 13, 23, 40, 42 and 48 have been amended. The amendments find clear support in the original application at least at pages 4, 15 and 16. Claims 41 and 43 have been canceled without prejudice or disclaimer. Accordingly, claims 1-40, 42 and 44-52 are currently pending, with claims 1, 23, 40 and 48 being independent claims. No new matter has been added.

The Examiner has objected to claim 13 because of an informality. The informality has been corrected. Accordingly, withdrawal of the objection is respectfully requested.

The Examiner has rejected claims 1, 3, 7-13, 23, 25-30, 35 and 48-52 under 35 U.S.C. §103(a) as unpatentable over Shinomiya et al. (US 2003/0185148) in view of Saleh et al. (US 6,801,496). Claims 2 and 24 are rejected under 35 U.S.C. §103(a) as unpatentable over Shinomiya et al. in view of Saleh et al. as applied to claim 1, further in view of Fortuna (US 6,778,833). Claim 4 is rejected under 35 U.S.C. §103(a) as unpatentable over Shinomiya et al. in view of Saleh et al. as applied to claim 3, further in view of Lotter et al. (7,218,645). Claim 5 is rejected under 35 U.S.C. §103(a) as unpatentable over Shinomiya et al. in view of Saleh et al. as applied to claim 1, further in view of Rabie et al. (US 7,092,356). Claims 14 and 31 are rejected under 35 U.S.C. §103(a) as unpatentable over Shinomiya et al. in view of Saleh et al. as applied to claim 1, further in view of Havansi (US 5,905,714). Claims 15 and 32 are rejected under 35 U.S.C. §103(a) as unpatentable over Shinomiya et al. in view of Saleh et al. as applied to claim 1, further in view of Greaves et al. (US 6,396,815). Claim 16 and 33 are rejected under 35 U.S.C. §103(a) as unpatentable over Shinomiya et al. in view of Saleh et al. as applied to claim 1, further in view of Liu et al. (US 2005/0068954). Claims 17, 19-22 and 36-39 are rejected under 35 U.S.C. §103(a) as unpatentable over Shinomiya et al. in view of Saleh et al. and Liu et al. as applied to claim 16, further in view of Izmailov et al. (US 2005/0015511). Claims 40-42 are rejected under 35 U.S.C. §103(a) as unpatentable over Shinomiya et al. in view of Izmailov et al. Claims 44-47 are rejected under 35 U.S.C. §103(a) as unpatentable over Shinomiya et al. in view of Izmailov et al. as applied to claim 40, further in view of Saleh et al. Claims 6, 18, 34

and 43 are indicated to be allowable if rewritten in independent form. The rejections are respectfully traversed in view of the amended claims.

Shinomiya discloses a spare path design method for a communication network in which spare path information is set in advance in each node of the communication network. A fault notification message including fault location information is transferred from a fault detection node to each node in the event of a link or a node fault (paragraph 0014).

Saleh discloses a protocol for configuring routes over a network (col. 1, lines 34-36). The time and resources required to restore a failed circuit in an optical network are reduced by partitioning the nodes of an optical network into zones (col. 2, lines 13-16). Each node in a network employing the protocol is assigned a globally unique address, such as a node ID which includes a zone ID and a node address (col. 5, lines 39-43).

Regarding claim 1, Shinomiya does not disclose or suggest a method of guaranteeing failure notification in a distributed system including *creating a failure notification group comprising a plurality of nodes, wherein the failure notification group has a unique identifier, associating with the unique identifier of the failure notification group a failure handling method of a distributed application running on some or all of the nodes of the failure notification group, and when a failure is ascertained, executing a failure handling method to perform an application level action*. Shinomiya does no more than send a fault notification message and execute a spare path design method when a fault is detected. Saleh does not provide the teachings that are lacking in Shinomiya. While Saleh describes grouping a plurality of nodes into zones, each having a zone ID, Saleh contains no disclosure or suggestion of *associating the unique identifier with a failure handling method of a distributed application running on some or all of the nodes of the failure notification group* and no disclosure or suggestion of *executing the failure handling method to perform an application level action when a failure is ascertained*, as required by amended claim 1. For these reasons, amended claim 1 is clearly and patentably distinguished over Shinomiya in view of Saleh, and withdrawal of the rejection is respectfully requested.

Claims 2-22 depend from claim 1 and are patentable over the cited references for at least the same reasons as claim 1.

Amended claim 23 is directed to a method of guaranteeing failure notification in a distributed system and requires, in part, *associating with a unique identifier of a failure notification group a failure handling method of a distributed application running on some or all*

of the nodes of the failure notification group, and when a failure is ascertained, signaling a failure notification to each node in the failure notification group and executing the failure handling method to perform an application level action. As discussed above, Shinomiya does not disclose or suggest a failure notification group having a unique identifier and does not disclose or suggest a failure handling method of a distributed application running on some or all of the nodes of the failure notification group, wherein the failure handling method is executed to perform an application level action when a failure is ascertained, as required by amended claim 23. Saleh does not provide the teachings that are lacking in Shinomiya. In particular, Saleh describes grouping nodes into zones each having a unique ID, but does not disclose or suggest associating the zones with a failure handling method of a distributed application running on some or all of the nodes of the failure notification group and does not disclose or suggest executing the failure handling method to perform an application level action when a failure is ascertained. For at least these reasons, amended claim 23 is clearly and patentably distinguished over Shinomiya in view of Saleh, and withdrawal of the rejection is respectfully requested.

Claims 24-39 depend from claim 23 and are patentable over the cited references for at least the same reasons as claim 23.

Claim 40 has been amended to incorporate the limitations of allowable claim 43 and the limitations of intervening claim 41. Accordingly, amended claim 40 is in condition for allowance.

Claims 42 and 44-47 depend from claim 40 and are patentable over the cited references for at least the same reasons as claim 40.

Amended claim 48 is directed to an application program interface embodied on computer-readable media, comprising a first function for creating a failure notification group and assigning a unique identifier to the failure notification group, a second function for associating with the unique identifier a failure handling method of a distributed application running on some or all nodes of the failure notification group, and a third function for signaling a failure notification to the failure notification group and executing the failure handling method to perform an application level action.

As discussed above, Shinomiya contains no disclosure or suggestion of creating a failure notification group having a unique identifier. Further, Shinomiya contains no disclosure or suggestion of associating the unique identifier with a failure handling method of a distributed

application running on some or all nodes of the failure notification group, wherein the failure handling method is executed to perform an application level action in response to a failure notification. Saleh describes grouping nodes into zones having a unique ID but contains no disclosure or suggestion of the zones being associated with a failure handling method of a distributed application running on some or all nodes of the failure notification group, wherein the failure handling method is executed to perform an application level action in response to a failure notification. For at least these reasons, amended claim 48 is clearly and patentably distinguished over Shinomiya in view of Saleh, and withdrawal of the rejection is respectfully requested.

Claims 49-52 depend from claim 48 and are patentable over the cited references for at least the same reasons as claim 48.

Based upon the above discussion, claims 1-40, 42 and 44-52 are in condition for allowance.

**CONCLUSION**

A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Dated: August 20, 2007

Respectfully submitted,

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